

ATTORNEY DOCKET NO. 00-VE13.25 CPA 1
(PATENT)**AMENDMENTS TO THE CLAIMS**

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:RECEIVED
CENTRAL INTELLIGENCE AGENCY

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1. (original) A spatial sound conference system comprising:
a conference station comprising:
right and left spatially disposed microphones connected to a communications channel for receiving right and left audio signals, wherein the differences between the right and left audio signals represent a head-related transfer function; and
a remote station comprising:
right and left spatially disposed loudspeakers connected to the communications channel.
2. (currently amended) A spatial sound conference system according to claim [[1]] 8, further comprising:
a compression unit connected to the right and left spatially disposed microphones for compressing the right and left audio signals; and
a decompression unit connected to the right and left spatially disposed loudspeakers for decompressing the compressed right and left audio signals.
3. (currently amended) A spatial sound conference system according to claim [[1]] 8, further comprising:
a microphone positioned in the remote station and connected to the communications channel for receiving an audio signal; and
a loudspeaker positioned in the conference station and connected through the communications channel to the microphone.
4. (original) A spatial sound conference system according to claim 3, further comprising:
a compression unit connected to the microphone positioned in the remote station for compressing the audio signal; and
a decompression unit connected to the loudspeaker positioned in the conference station for decompressing the compressed audio signal.
5. (currently amended) A spatial sound conference system according to claim 1, ~~wherein the right and left spatially disposed microphones are positioned on a dummy head~~ 6 further comprising:
a head-tracking sensor in the remote station connected to the communications channel;
and
a position simulator attached to the dummy head and connected through the communications channel to the sensor.

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6. (currently amended) A spatial sound conference system according to claim [[5]] 1, further comprising:
a microphone positioned in the remote station and connected to the communications channel for receiving an audio signal; and
a loudspeaker positioned proximal to the dummy head and connected through the communications channel to the microphone, and
wherein the right and left spatially disposed microphones are positioned on a dummy head.
7. (currently amended) A spatial sound conference system according to claim [[5]] 1, further comprising:
a microphone positioned in the remote station and connected to the communications channel for receiving an audio signal; and
right and left spatially disposed loudspeakers positioned in the conference station and connected through the communications channel to the microphone, and
wherein the right and left spatially disposed microphones are positioned on a dummy head..
8. (currently amended) A spatial sound conference system ~~according to claim 5~~, further comprising:
a conference station including:
right and left spatially disposed microphones positioned on a dummy head and connected to a communications channel for receiving right and left audio signals, wherein the differences between the right and left audio signals represent a head-related transfer function, and
a position simulator attached to the dummy head; and
a remote station including:
right and left spatially disposed loudspeakers connected to the communications channel, and
a head-tracking sensor in the remote station connected to the communications channel~~[[; and]]~~
~~[[a]] said position simulator attached to the dummy head and connected through the communications channel to the head tracking sensor.~~
9. (currently amended) A spatial sound conference system according to claim [[1]] 8, further comprising:
a video camera positioned in the conference station and connected to the communications channel for receiving a video image; and
a display positioned in the remote station and connected through the communications channel to the video camera.
10. (original) A spatial sound conference system according to claim 9, wherein the video camera is positioned near the location of eyes on a dummy head.
11. (original) A spatial sound conference system according to claim 9, wherein the display is a head-mounted display.

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12. (currently amended) A spatial sound conference system according to claim [[1]] 8, wherein the right and left spatially disposed loudspeakers are a headset.
13. (currently amended) A method for conducting a spatial sound conference comprising the steps of:
detecting movements of a conference participant at a remote station to provide movement information;
transmitting said movement information to a conference station;
controlling a dummy head at said conference station in response to said movement information;
converting audio information into right and left audio signals at [[a]] said conference station, wherein the conversion imparts a differential characteristic to the right and left audio signals, and the differential characteristic is represented by a head-related transfer function, and the right and left audio signals comprise spatialized audio;
transmitting audio information representative of said spatialized audio from the conference station across a communications channel to a remote station; and
playing the spatialized audio in the remote station.
14. (original) A method for conducting a spatial sound conference according to claim 13, further comprising the steps of:
compressing the right and left audio signals after the step of converting; and
decompressing the compressed right and left audio signals after the step of transmitting.
15. (currently amended) A spatial sound conference system comprising:
a transmitting station comprising:
a microphone connected to a communications system for receiving an audio signal;
a head-related transfer function unit connected to the communications system for imparting a head-related transfer function to the audio signal to produce a spatialized audio signal, and
a compression unit for compressing the audio signal; and
a receiving station comprising:
a decompression unit for decompressing the compressed audio signal, and
right and left spatially disposed loudspeakers connected to the communication system for receiving the spatialized audio signal.
16. (currently amended) A spatial sound conference system according to claim 15, ~~further comprising wherein:~~
[[a]] said compression unit is connected to the microphone for compressing the audio signal; and
[[a]] said decompression unit is connected to the head-related transfer function unit for decompressing the compressed audio signal.

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17. (currently amended) A spatial sound conference system according to claim 15, ~~further comprising wherein:~~
[[a]] said compression unit is connected to the head-related transfer function unit for compressing the spatialized audio signal; and
[[a]] said decompression unit is connected to the right and left spatially disposed loudspeakers for decompressing the compressed spatialized audio signal.
18. (currently amended) A spatial sound conference system according to claim 15, wherein ~~the head-related transfer function unit is contained in a spatial sound conference bridge:~~
said receiving station further comprises a head-tracking sensor configured to detect movements of a conference participant at said receiving station to provide movement information; and
said head-related transfer function unit is responsive to said movement information for imparting the head-related transfer function to said audio signal to produce said spatialized audio signal.
19. (currently amended) A method for conducting a spatial sound conference comprising the steps of:
receiving an audio signal at a transmitting station;
compressing the audio signal;
transmitting the audio signal from the transmitting station to a spatial sound conference bridge;
imparting a head-related transfer function to the audio signal to create a spatialized audio signal;
sending the spatialized audio signal from the spatial sound conference bridge to a receiving station;
decompressing the compressed audio signal; and
playing the spatialized audio signal on spatially disposed loudspeakers at the receiving station.
20. (currently amended) A method for conducting a spatial sound conference according to claim 19, ~~further comprising the steps of~~ wherein:
said step of compressing the audio signal is performed after the step of receiving; and
said step of decompressing the compressed audio signal is performed after the step of transmitting.
21. (currently amended) A method for conducting a spatial sound conference according to claim 19, ~~further comprising the steps of~~ wherein:
said step of compressing the spatialized audio signal after the step of imparting; and
said step of decompressing the compressed spatialized audio signal is performed after the step of sending whereby said compressed spatialized audio signal is decompressed.
22. (currently amended) A method for conducting a spatial sound conference comprising the steps of:
receiving an audio signal at a transmitting station;
compressing the audio signal to provide a compressed audio signal;

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transmitting the compressed audio signal from the transmitting station to a receiving station;
decompressing the compressed audio signal to produce a decompressed audio signal;
imparting a head-related transfer function to the decompressed audio signal to create spatialized audio signal;
playing the spatialized audio signal on spatially disposed loudspeakers in the receiving station.

23. (currently amended) A method for conducting a spatial sound conference according to claim 22, further comprising the ~~steps~~ step of:

~~compressing the audio signal after the step of receiving; and~~
~~decompressing the compressed audio signal after the step of transmitting~~
detecting movements of a conference participant to provide movement information,
wherein said step of imparting is responsive to said movement information to create said
spatialized audio signal.

24. (currently amended) A spatial sound conference bridge comprising:

at least two input ports for receiving at least two audio signals and at least two audio signal output ports; and

a head-related transfer function unit connected to at least one of said input ports for imparting a head-related transfer function to a corresponding audio signal to produce at least one spatialized audio signal;

a compression unit connected to said head-related transfer function unit for compressing
said at least one spatialized audio signal to provide a compressed spatialized audio signal; and
~~wherein~~

a first output port is connected to the ~~head-related transfer function unit~~ compression unit for transmitting the compressed spatialized audio signal.

25. (original) A spatial sound conference bridge according to claim 24, further comprising:

a decompression unit connected to at least one input port for decompressing at least one audio signal.

26. (cancelled)

27. (cancelled)